second means connected with the bases of the transistors for alternately providing drive signals thereto, said second means including an output winding of a second current transformer and being responsive to conduction of the conducting one of said transistors for applying a negative feedback signal thereto having a magnitude less than that of the positive feedback signal; and

control means associated with the first means for terminating said positive feedback signal prior to termination of said negative feedback signal, whereby the drive being applied to said conducting transistor rapidly reverses in polarity.

2. (Twice amended) The inverter circuit of Claim 1 wherein [said first means includes an] the output winding of [a] the current transformer [for] providing said positive feedback signals [with a magnetic core] is interconnected between the bases of the transistors through a low resistance path.

3. (Twice amended) The inverter circuit of Claim [2] 1 wherein said control means includes a saturable magnetic core for said first current transformer, said saturable magnetic core causing termination of said positive feedback signal when it becomes saturated and an effective short circuit between the bases of the transistors through the output winding of the first current transformer.

Please cancel Claim 4 without prejudice.

5. (Twice amended) The inverter of Claim [4] 3 wherein said second current transformer has a non-saturable magnetic core separate and apart from said saturable magnetic core and continues to provide said negative feedback signals after the core of said first transformer becomes saturated.

6. (Twice amended) The inverter of Claim 5 wherein said [first transformer has an] output winding of the first transformer is directly connected between the bases of said pair of switching transistors through a low resistance path, and

said output winding of said second current transformer [has an output winding] is directly connected between the bases of

B2

said pair of switching transistors through a low resistance path.

8. (Twice amended) The inverter of Claim 1 wherein:

B3

said drive circuit and said pair of switching [transistor] transistors self-oscillate.

15. (Twice amended) An electrical inverter circuit for converting a unidirectional input voltage into an alternating output voltage, comprising:

B4

a pair of alternately conducting switching transistors each having a collector-emitter junction and a base-emitter junction[s]; and

drive control means effective to provide reverse bias to the base-emitter junctions of both transistors [during] substantially throughout the periods when their collector-emitter voltages are significantly greater than the transistor collector-emitter saturation voltages.

25. (Twice amended) In an [An] electrical inverter circuit containing a pair of alternately conducting first and second switching transistors, each having a collector and base-emitter junction, and adapted to convert a unidirectional input voltage into a cyclical, trapezoidal shaped, alternating output voltage, the improvement comprising:

B5

control means connected to said transistors and operable to effect alternating periodic conduction thereof, said control means supplying to the base-emitter junction of each transistor a control signal effective to turn on a transistor only after its collector voltage has dropped substantially to its lowest level prior to said control signal being supplied thereto.

33. (Twice amended) The inverter circuit of Claim [32] 25 wherein:

B6

First and second diodes respectively [diode] shunting the base-emitter [junction] junctions of [a] said first and second transistors, [transistor is] each of said first and second diodes being operable to function as a clamp to respectively limit the voltage rise at the collector of said second and first [transistor] transistors to twice the magnitude of the unidirectional

input voltage.

35. (Amended) [A push-pull] In an electrical inverter circuit for producing an AC output voltage from a source of DC voltage having a power transformer with an input coil wound around a magnetic core and connected with the DC voltage source through a pair of alternately conducting switching transistors, each [having] of which has a control input element, [and adapted to convert a unidirectional input voltage into an alternating output voltage] the improvement comprising:

first [drive control] means [including saturable current feedback means] for alternately supplying [positive conducting] [control] drive signals to the control input [element] elements of each transistor, said first means including an output winding of a transformer with a saturable magnetic core separate and apart from said magnetic core of the power transformer and being responsive to conduction of the conducting one of the transistors for supplying a positive feedback signal thereto; and

second [drive control] means [including non-saturable current feedback means] for alternately supplying [subtractive control] drive signals to the control input [element] elements of each transistor after said first saturable [feedback means] magnetic core has saturated whereby a conducting transistor is rapidly and efficiently turned off after saturation, said second means including an output winding of another transformer with a magnetic core separate and apart from said magnetic core of the power transformer.

37. (Amended) In an inverter for producing an alternating output signal from a source of DC voltage connectable therewith and having a pair of switching transistors, an improved drive circuit, comprising:

a first drive means for alternately providing a first drive signal to said pair of switching transistors, said first drive signal tending to cause the transistor to which it is provided to assume a conductive state;

a second drive means for alternately providing a second drive signal to said pair of switching transistors, said second drive signal tending to cause the transistor to which it is provided to assume a nonconductive state, said second drive signal being provided to said transistor [ptomptly] promptly after termination of provision of said first drive signal thereto[.]; and means including a diode for preventing said second signal from being applied to the nonconductive one of said transistors.

Please cancel Claims 42 and 43 without prejudice.

Please add claims 45, 46, 47 and 48 as follows:

45. The inverter circuit of Claim 35 in which the magnetic cores of said first and second means are separate and apart from one another.

46. The inverter circuit of Claim 35 in which the transformers of said first and second means are current transformers.

47. The inverter of Claim 1 in which both of said transformers have magnetic cores, said magnetic cores being noncoupled magnetically with one another.

48. The inverter of Claim 47 including a power transformer having a magnetic core, said magnetic core being separate and apart from the magnetic cores of the transformers of the first and second means.

REMARKS

By the foregoing amendment, applicant has amended claims 2, 8, 15 and 37 in accordance with the Examiner's comments. It is believed that these amendments obviate the basis for the objection to these claims under 35 U.S.C. §112 and withdrawal of that objection is therefore respectfully solicited.

Claims 1, 2, 3, 5, 6, 15, 25, 33, 35 and 37 have also been amended to more clearly define applicant's invention.

Claims 4, 42 and 43 have been cancelled without prejudice.

Claims 45, 46, 47 and 48 have been added.